

Material Data Sheet

Trade name	PTFE+25% carbon (extruded)		
DIN EN ISO 1043 designation	PTFE		
Modification	Carbon		
Properties	Unit	Test method	Value
General Properties			
Density	g/cm ³	ASTM D 792	2,09
Water absorption	%	ASTM D 570	<0,01
Flammability ATB	sec	ASTM D 635	<5
AEB	mm	ASTM D 635	<5
Wear factor (K) (PV=100)	(3)		100
Mechanical Properties			
Tensile strength	MPa	ASTM D 4894	15
Elongation at break	%	ASTM D 4894	130
Hardness	Skala D	ASTM D 2240	62
Deformation under load (24h, 13,7MPa, 23°C)	%	ASTM D 621	6
Friction coefficient static		ASTM D 3028 (1)	
Friction coefficient dynamic		ASTM D 3028 (1)	0,11
Compressive strength 1% deformation	MPa	ASTM D 695	10
Thermal Properties			
Coefficient of linear expansion from 25 to 100°C	°C ⁻¹	ASTM D 696	8 x 10 ⁻⁵
Thermal conductivity	W/mK	ASTM C 177	0,20
Service temperature range	°C		-200 / +260
Electrical Properties			
Dielectric strength (in air, thickness 0,125mm)	kV/mm	ASTM D 149	80
Dielectric constant (50-109 Hz)		ASTM D 150	2,1
Dissipation factor		ASTM D 150	<0,0002
Volume resistivity	Ohm/cm	ASTM D 257	10 ⁷
Surface resistivity	Ohm	ASTM D 257	10 ⁶
Arc-resistance (420 sec)	sec	ASTM D 495	OK (2)

Remarks:

All the properties have been determined at 23°C.

(1) Speed 5 m/min; load 0,1 MPa, sliding surface steel roughness Ra = 0,4 ÷ 0,6 micron.

(2) Without defects.

(3) cm³ x min x 10⁻⁸ / kg x m x h